

## CONTENTS

### **Preface**

*Jie Li, Tongji University, China*

*Ying Lei, Xiamen University, China*

*Zhi Shen Wu, Ibaraki University, Japan*

*Rui-Feng Liang, West Virginia University, USA*

### **Introduction to Rammed Earth and Hakka Tulou Special Session**

*Rui-Feng Liang*

*West Virginia University, USA*

### **Keynote Papers**

#### **Advanced Fiber Reinforced Polymer Composites for Sustainable Civil Infrastructures**

*Gangarao Hota and Rui-Feng Liang*

*West Virginia University, USA*

#### **A Smart Wireless Sensor Network for Structural Damage Detection**

*Ying Lei*

*Xiamen University, China*

### **Invited Papers**

#### **Translational Research in Mechanics and Materials with Emphases on Sustainability and Durability**

*Ken P. Chong, Jiao-Yan Li, and James D. Lee, George Washington University, USA*

*Shuang-Ling Chong, Federal Highway Administration (retired), USA*

#### **Use of Rammed Earth in Aboriginal Remote Communities of Western Australia: A Case Study on Sustainability and Thermal Properties**

*Daniela Ciancio*

*Univ of Western Australia, Australia*

#### **An Overview of Some Current Recommendations on the Suitability of Soils for Rammed Earth**

*Daniela Ciancio, Univ of Western Australia, Australia*

*Paul Jaquin, Ramboll, Sweden and Earth Building UK*

#### **The Distinctions of Architectural Morphology Between Tubao and Tulou in Fujian**

*Zhi-Jian Dai*

*Xiamen University, China*

#### **A History of Rammed Earth in Asia**

*Paul Jaquin*

*Ramboll, Sweden and Earth Building UK*

**Spatial Order and Typology of Hakkadellings**

*Kazutoshi Katayama*

*Tokyo University of the Arts, Japan*

**Traditional Environmental Knowledge in Hakka Weilongwu: from the view of Anthropology of Landscape**

*Hironao Kawai*

*Sun Yat-sen University, China*

**Nondestructive Evaluation of Historic Hakka Rammed Earth Structures**

*Rui-Feng Liang, Gangarao Hota, and Daniel Stanislawski, West Virginia University, USA*

*Ying Lei, Yan-Hao Li, and Yong-Qiang Jiang, Xiamen University, China*

**Structural Responses of Hakka Rammed Earth Buildings under Earthquake Loads**

*Rui-Feng Liang, Daniel Stanislawski and Gangarao Hota*

*West Virginia University, USA*

**Heaven and Earth in Tulou Design**

*Keith D. Lowe*

*Tsung Tsin Association of Ontario, Canada*

**Experimental Study of Cement Mortar-Steel Fiber Reinforced Rammed Earth Wall**

*Miao Pang, Shuai Yang, and Yong-Qiang Zhang*

*Zhejiang University, China*

**Environmental Assessment and Preservation for Fujian Hakka Villages**

*Minoru Ueda*

*MU Design Japan*

**Sustainable Technology Research and Demonstration Center for Earth Structures**

*Minoru Ueda and Judy Ueda*

*MU Design Japan*

**The Genes of Tulou: A Study on Preservation and Sustainable Development of Tulou**

*Shao-Sen Wang, Su-Yu Li, and Shi-Jie Liao*

*Xiamen University, China*

**A Report of Contemporary Rammed Earth Construction and Research in North America**

*Bly Windstorm*

*North American Rammed Earth Builders Association and Earth Dwell Ltd, USA*

**Review on Technics of Rammed Earth Wall**

*Cheng-Bin Zhou and Yong-Ning Liang*

*Fuzhou University, China*

**Performance Observations of the Beijing Area's Unrestored Great Wall: 'Rammed Earth and Rubble Core'**

*David Dark*

*Executive Director Even Pina Architecture Ltd. (HK)*